

Giorgio Bellettini

CURRICULUM VITAE

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Born in Bologna (Italy) on May 5th, 1934.

Laurea *Cum Laude* in Physics at the University of Pisa on December 12, 1957.

Full professor in General Physics as of 1979. Currently at Fermilab on leave of absence from the Physics Department of the University of Pisa.

Spokesperson of the Pisa Photoproduction Group at the Frascati Electron-Synchrotron, from 1960 to 1963.

Spokesperson of the Pisa-Stony Brook experiment at the CERN Intersecting Storage Rings (ISR, Switzerland), from 1968 to 1974.

Chairman of the Intersecting Storage Rings Committee of CERN from 1980 to 1985.

Director of the National Laboratories of Frascati (LNF) of the *Istituto Nazionale di Fisica Nucleare* of Italy (INFN) from 1974 to 1976.

Chairman of the INFN Program Advisory Committee for Accelerator Experiments from 1971 to 1974 and from 1985 to 1991.

Deputy Spokesperson of the Solenoidal Detector Collaboration at the Superconducting Super Collider (SSC, United States), from 1990 to 1992. In 1992 the U.S. House of Representatives canceled the SSC program.

Spokesperson of the Italian groups collaborating in the Collider Detector Experiment at Fermilab (CDF, United States) as of 1980.

Member of the Scientific Policy Committee of CERN from 1992 to 1998.

Co-spokesperson of the CDF Collaboration at Fermilab from 1995 to 1997.

Member of the Program Advisory Committee of Fermilab from 1997 to 2001.

Member of the Advisory Committee for project 242 of the *Agenzia Spaziale Italiana* from January 2001 to September 2001.

Member of the International Technology Recommendation Panel of the International Committee for Future Accelerators, 2003

RESEARCH

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experiments on antiproton interactions in nuclear emulsions (1957-1959)(i);

experiments on meson photoproduction at the Frascati Electron-Synchrotron (1960-1963)(ii);

experiments on elastic scattering, quasi-elastic scattering, total cross-sections of proton, pions and K-mesons on protons, neutrons and nuclei at the CERN PS (1964-1970)(iii), and polarized scattering of hadrons on protons(iv);

experiments on total cross-section and correlations in particle production(v), and on production of muon pairs in proton-proton interactions at the CERN ISR (1970-1980)(vi);

design of the Magnetic Detector for ALA (MDA) to study meson spectroscopy at the high intensity, 2 GeV electron-positron collider Anello di Luminosità Alta (ALA) of the National Laboratories of Frascati(vii); and

experiments on production and decay of Intermediate Vector Bosons, beauty quark physics, jet physics, and search for top quark and new particles in proton-antiproton interactions at the Fermilab Tevatron Collider, as of 1980.

The two major results of his experiments have been the discovery of the raising total proton-proton cross-section at the ISR in 1972, and the evidence for, and the discovery of, the top quark at the Fermilab Tevatron Collider in 1994 and 1995.

PUBLICATIONS

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Co-author of over 200 publications in international scientific journals.
Some references to the above-mentioned discoveries are:

"Measurement of the Total Proton-Proton Cross Section at the ISR, "S.R. Amendolia et al., Physics Letters 44B, 119 (1973).

"Evidence for Top Quark Production in ppbar Collisions at $s=1,8$ TeV"
F. Abe et al., Phys. Rev. Letters 73, 225 (1994).

"Kinematical Evidence for Top Pair Production with Multijet Events in ppbar Collisions at $s=1,8$ TeV," F. Abe et al., The CDF Collaboration, Phys. Rev. 51D, 4623 (1995).

"Observation of Top Quark Production in ppbar Collisions with the Collider Detector at Fermilab," F. Abe et al., Phys. Rev. Letters 74, 2626 (1995).

FOOTNOTES

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- (i) As a member of the Rome group led by Edoardo Amaldi.
- (ii) Leading a 4-person group comprised of Carlo Bemporad, Pierluigi Braccini, Lorenzo Foà. This group was the first one to observe the Primakoff effect (neutral pion photoproduction in the nuclear electric field), and to make use of it for measuring the lifetime of the neutral pion.
- (iii) In the CERN group lead by Giuseppe Cocconi.

- (iv) Leading the Pisa group in the CERN/Orsay/Pisa Collaboration whose Spokesperson was Luis Dick of CERN;
- (v) Leading a U.S.- Italy collaboration, comprised of, among others, Paolo Giromini, Aldo Menzione and Luciano Ristori from Pisa. The Stony Brook group was led by Guido Finocchiaro and comprised, among others, Paul Grannis, Daniel Green and Robert Kephart.
- (vi) As a member of the Pisa - M.I.T. group lead by Piero Braccini and Samuel C.C. Ting.
- (vii) The design of the full-coverage magnetic detector MDA for a new electron-positron collider ALA to be built at the Frascati Laboratories was made in the years 1976-1978, leading a Frascati/Pisa group comprising among others Paolo Giromini, Enzo Iarocci and Paolo Laurelli. The ALA/MDA project was approved of but not funded by INFN.

TEACHING

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Assistant Professor of:

- *Atomic Physics*, 1960-1961 (University of Pisa)
- *Electronics*, 1961-1963 (University of Pisa)

Associate Professor of:

- *Nuclear Physics*, 1966-1977 (University of Pisa)
- *Electronic Optics and Particle Accelerators*, 1978 – 1989 (University of Pisa)

Full Professor of:

- *Classical Mechanics and Thermodynamics*, 1989- 1992 (University of Ferrara) and 1992 - 1996 (University of Pisa)
- *Physics with Particle Colliders*, as of 1997 (University of Pisa)

COLLOQUIA

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Speaker in many international conferences, colloquia and seminars at Physics Institutions in Europe and the U.S.

Chairman and co-organizer of a number of International Conferences.

Co-founder and co-organizer of the *Rencontres de Physique de la Vallee d'Aoste* that are held annually in La Thuile, Italy as of 1987.

HONORS

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Prize for Physics of the Italian Minister for Science and Technology, 1998;

First Prize of the Joint Institute of Nuclear Research, Dubna (Russia), 1999;

American Physical Society Fellow, 1999; and

Commendatore of the Italian Republic, 2000

"Socio Benemerito" of the Italian Physical Society, 2007